TIFAC

KIRAN-IPR Examination

PREVIEW QUESTION BANK

Module Name : WOSC08-E
Exam Date : 31-Oct-2015 Batch : 11:00-13:00

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
Multiple Choice Question				
1	1	The heat content of a system is called A1 : enthalpy A2 : entropy A3 : heat of reaction A4 : internal energy	1.0	0.25
Multiple Choice Question				
2	2	Fire point of flammable liquid is generally A1 : equal to open-cup flash point	1.0	0.25

		A2 : slightly below open-cup flash point A3 : slightly above open-cup flash point A4 : none of these		
Multiple Choice Question				
3	3	One ton of refrigeration is defined as the heat removal rate corr to freezing of one ton of water at 0^0 C in A1 : 1 hour A2 : 1 day A3 : 1 minute A4 : 1 second	1.0	0.25
Multiple Choice Question				
4	4	Ostwald process is used for the preparation of A1 : sulfuric acid A2 : phosphoric acid	1.0	0.25

		A3 : hydrochloric acid A4 : nitric acid		
Multiple Choice Question				
5	5	According to the Kohlrausch law of independent migration of ion $\Lambda^{\circ}_{m\,(NaCl)}$, is equal to A1 : $\lambda^{0}_{Na^+} + \lambda^{0}_{Cl^-}$ A2 : $\lambda^{0}_{Na^+} - \lambda^{0}_{Cl^-}$ A3 : $\lambda^{0}_{Na^+} \times \lambda^{0}_{Cl^-}$ A4 : $\lambda^{0}_{Na^+} / \lambda^{0}_{Cl^-}$	1.0	0.25
Multiple Choice Question				
6	6	The metal ions present in hemoglobin and vitamin B12 are A1 : iron and cobalt, respectively A2 : cobalt and zinc, respectively	1.0	0.25

		A3 : zinc and iron, respectively A4 : cobalt and iron, respectively		
Multiple Choice Question				
7	7	The Lewis acid among the following is A1 : triethylamine A2 : trimethylborane A3 : trimethylphosphine A4 : pyridine	1.0	0.25
Multiple Choice Question				
8	8	The Grignard reagent is A1 : CH_3Li A2 : CH_3MgBr A3 : $(CH_3)_2CuLi$ A4 : $(i\text{-}Pr)_2NMgBr$	1.0	0.25

Multiple Choice Question				
9	9	The number of H_2O molecules in 18.02g of water is A1 6.022×10^{23} : A2 108.55×10^{23} : A3 96.35×10^{23} : A4 12.04×10^{23} :	1.0	0.25
Multiple Choice Question				
10	10	In a unit cell, if the constituent particles occupy only the corner positions, then it is called as A1 : primitive A2 : face-centred A3 : body-centred A4 : end-centred	1.0	0.25
Multiple Choice Question				
11	11	Which one of the following property is not applicable to suspension?	1.0	0.25

		A1 : Brownian movement A2 : Newtonian Motion A3 : Stokes' law A4 : Rapid rate of sedimentation		
Multiple Choice Question				
12	12	Which type of lipoprotein is responsible for atherosclerosis? A1 : HDL A2 : LDL or ULDL A3 : Chylomicron A4 : Any of the above	1.0	0.25
Multiple Choice Question				
13	13	Erythromycin belongs to the class: A1 : β - Lactam A2 Peptide	1.0	0.25

		: A3 : Aminogylcoside A4 : Macrolide		
Multiple Choice Question				
14	14	Antibodies are produced by: A1 : T- cells A2 : NK cells A3 : β - cells A4 : Eosinophils	1.0	0.25
Multiple Choice Question				
15	15	What is the full form of ANDA? A1 : Active New Drug Application. A2 : Active New Drug Addendum. A3 : Abbreviated New Drug Application.	1.0	0.25

		A4 : Alternative New Drug Application.		
Multiple Choice Question				
16	16	Sulphonamides act mainly by inhibiting A1 : Amide synthesis in the bacteria A2 : Carboxylic acid synthesis in the bacteria A3 : Folic acid synthesis in the bacteria A4 : Cell wall synthesis in the bacteria	1.0	0.25
Multiple Choice Question				
17	17	Rauwolfia serpentina belongs to A1 : Family Rubiacea A2 : Family Euphorbiacea A3 : Family Apocynaceae A4 : Family Labiateae	1.0	0.25
Multiple Choice Question				
18	18	One of these is not part of the phase I reaction of drug	1.0	0.2

		metabolism A1 : Oxidation reaction A2 : Conjugation reaction A3 : Reductive reaction A4 : Hydrolytic reaction		5
Multiple Choice Question				
19	19	An antagonist is said to possess A1 : Both Affinity and Intrinsic activity A2 : Only Affinity and Zero Intrinsic activity A3 : Only Intrinsic activity and no affinity A4 : No Affinity and Intrinsic activity	1.0	0.25
Multiple Choice Question				
20	20	One of the examples of Kinase linked receptors is A1 : Adrenergic receptor	1.0	0.25

		A2 : Cholinergic receptor A3 : Insulin receptor A4 : Calcium ATpase		
Multiple Choice Question				
21	21	Penicillin acts as an antibiotic on susceptible bacteria by interfering with A1 : Cell wall formation A2 : The electron transport chain A3 : DNA synthesis A4 : Protein synthesis	1.0	0.25
Multiple Choice Question				
22	22	Genetic engineering involves which of the following A1 : Conjugation A2 : Cloning A3 Mutation	1.0	0.25

		: A4 : Deamination		
Multiple Choice Question				
23	23	Phytochrome is a A1 : Blue protein pigment A2 : Red protein pigment A3 : Yellow protein pigment A4 : None	1.0	0.25
Multiple Choice Question				
24	24	In eukaryotes genetic material is present in the A1 : nucleus only A2 : nucleus and some of the organelles present in the cytoplasm A3 : organelles present in the cytoplasm only A4 : none of the above	1.0	0.25

Multiple Choice Question				
25	25	Transcription is a process in which A1 : DNA synthesis takes place A2 : mRNA synthesis takes place A3 : protein synthesis takes place A4 : DNA and mRNA synthesis takes place	1.0	0.25
Multiple Choice Question				
26	26	A nucleotide consists of A1 : Nitrogenous base A2 : Nitrogenous base + pentose sugar A3 : Nitrogenous base + phosphate A4 : Nitrogenous base + pentose sugar + phosphate	1.0	0.25
Multiple Choice Question				
27	27	Peptide bonds are formed by involving A1 : Two amino groups	1.0	0.25

		A2 : Two carboxyl groups A3 : Two keto groups A4 : One carboxyl and one amino group		
Multiple Choice Question				
28	28	DNA isolated from *Aspergillis* has an adenine content of 25%. B upon this information, what is the %G+C within the *Asper* DNA? A1 : 0% A2 : 25% A3 : 50% A4 : 75%	1.0	0.25
Multiple Choice Question				
29	29	Benedict's solution is not reduced by A1 : Glucose A2 : Fructose	1.0	0.25

		A3 : Sucrose A4 : Lactose		
Multiple Choice Question				
30	30	DNA of organism A has 60%. GC and 40%. AT and organism B has 40%. GC and 60%. AT, the Tm value of the DNA of A1 : organism A will be higher than organism B A2 : organism B will be higher than organism A A3 : organism A & B will be same A4 : no conclusion can be drawn	1.0	0.25
Multiple Choice Question				
31	31	Which of the following protein is not a part of the cytoskeletal structure of a cell A1 : tubulin A2 : actin A3 : albumin	1.0	0.25

		A4 : kinesin		
Multiple Choice Question				
32	32	p53 is considered an important marker for which of the following disease A1 : diabetes A2 : cancer A3 : AIDS A4 : malaria	1.0	0.25
Multiple Choice Question				
33	33	ATP synthase is an example of natural molecular motor that can convert A1 : mechanical energy into chemical energy A2 : electrical energy into mechanical energy A3 : chemical energy into mechanical enegy A4 : chemical energy into electrical enegy	1.0	0.25

Multiple Choice Question				
34	34	Propidium iodide staining for the cells is used for A1 : haemoglobin assay A2 : cell viability assay A3 : cellular protein estimation assay A4 : None of the above	1.0	0.25
Multiple Choice Question				
35	35	Intron splicing occurs after A1 : transcription A2 : translation A3 : transpiration A4 : None of the above	1.0	0.25
Multiple Choice Question				
36	36	Green Fluorescent protein is isolated from A1 fish	1.0	0.25

		: A2 : zebra A3 : monkey A4 : horse		
Multiple Choice Question				
37	37	Leaves with Kranz anatomy are present in A1 : C3 plants A2 : C4 plants A3 : both C3 and C4 plants A4 : CAM plants	1.0	0.25
Multiple Choice Question				
38	38	Which one of the following is considered as Biodiversity hotspot in India A1 : Aravali ranges A2 : Western Ghats	1.0	0.25

		A3 : Thar Desert A4 : Runn of Kutch		
Multiple Choice Question				
39	39	At Isoelectric point a molecule carries A1 : positive charge A2 : negative charge A3 : no net electric charge A4 : None of the above	1.0	0.25
Multiple Choice Question				
40	40	Hybridoma Technology is employed for production of A1 : polyclonal antibodies A2 : monoclonal antibodies A3 : polyclonal antigens A4 monoclonal antigens	1.0	0.25

		:		
Multiple Choice Question				
41	41	Under which of the following conditions can a gas to be consid an ideal gas? T_r and p_r are the reduced temperature an pressure, respectively. A1 $T_r > 1$ and $p_r > 1$: A2 $T_r < 1$ and $p_r < 1$: A3 $T_r > 1$ and $p_r < 1$: A4 $T_r < 1$ and $p_r > 1$:	1.0	0.25
Multiple Choice Question				
42	42	For a substance in a saturated state, which of the following are correct? A1 : Enthalpy is constant A2 : Pressure and temperature are correlated A3 : Pressure and temperature are independent properties A4 : pV = mRT is applicable	1.0	0.25

Multiple Choice Question				
43	43	A Carnot cycle comprises of four processes which are A1 : Two isobaric processes and two isentropic processes A2 : One isobaric process, one isothermal process and two isentropic processes A3 : Two isothermal processes and two isentropic processes A4 : Two isothermal processes and two isobaric processes	1.0	0.25
Multiple Choice Question				
44	44	A vessel containing water at 10 °C is kept on a table where a temperature (T_∞) is 40 °C. As the water warms up, the tempera exterior surface of the vessel increases with time. At any insta the surface temperature is T_s which is uniform all over. Th surface area for heat transfer is 1000 mm^2. Assume that t moisture condensation on the vessel exterior and the ave transfer rate is 5 $W/(m^2K)$. At an instant when the surface tem 20 °C, the convection heat transfer rate will be: A1 : 0.1 W A2 : 100,000 W A3 : 1 W A4 : 0.05 W	1.0	0.25

Multiple Choice Question				
45	45	Consider air flow in a duct. The differential pressure measured static tube placed in the duct and facing into the flow d measured to be 4 mm of Water. Assuming the density of air an 1 and 1000 kg/m^3, respectively, which of the following is closest speed? ('g' may be taken as 10 m/s^2). A1 : 0.2 m/s A2 : 6.3 m/s A3 : 4.5 m/s A4 : 8.9 m/s	1.0	0.25
Multiple Choice Question				
46	46	Copper is made into wires by a process called A1 : pulling A2 : turning A3 : drawing A4 : thinning	1.0	0.25

Multiple Choice Question				
47	47	The carbon content of mild steel that is used for making grills on windows is about A1 : 2% A2 : 0.2% A3 : 20% A4 : 0.002%	1.0	0.25

Multiple Choice Question				
48	48	After a perfectly elastic collision between two spheres A1 : The total momentum is conserved but total energy is not. A2 : The total energy is conserved but total momentum is not. A3 : Both total momentum and total energy are conserved. A4 : Neither total momentum nor total energy are conserved	1.0	0.25

Multiple Choice Question				
49	49	An electric motor operates at 1500 RPM and powers a gear box. The input gear has 20 teeth and the output gear speed is 600 RPM. The number of teeth on the output gear is	1.0	0.25

		A1 : 20 A2 : 8 A3 : 12 A4 : 50		
Multiple Choice Question				
50	50	Which one of the following wears is predominant in cemented carbide tools? A1 : Flank wear A2 : Attrition wear A3 : Crater wear A4 : None of these	1.0	0.25
Multiple Choice Question				
51	51	The value of chip thickness ratio is A1 : Less than one A2 Greater than one	1.0	0.25

		: A3 : Equal to one A4 : None of these		
Multiple Choice Question				
52	52	The ideal shape of a riser is A1 : Cubical A2 : Spherical A3 : Cylindrical A4 : Conical	1.0	0.25
Multiple Choice Question				
53	53	The specific modulus of elasticity is defined as A1 : Modulus of elasticity divided by the weight of the material A2 : Modulus of elasticity divided by the specific gravity of the material A3 : Modulus of elasticity divided by the density of the material	1.0	0.25

		A4 : None of the above		
Multiple Choice Question				
54	54	Which of the following is a spring controlled governor A1 : Watt A2 : Porter A3 : Proel A4 : Hartung	1.0	0.25
Multiple Choice Question				
55	55	Cycloidal tooth profile is not preferred over involute profile because A1 : Pressure angle changes during engagement/disengagement A2 : Pressure angle remains constant A3 : Problem of interference A4 : None of the above	1.0	0.25
Multiple Choice Question				

56	56	Herringbone gear is mainly used with the following advantage A1 : Reduction in friction A2 : Reduction in radial load A3 : Nullify axial load A4 : Enhancement of impact strength	1.0	0.25
Multiple Choice Question				
57	57	Numerical value of module of the gear having 25 teeth and pitch circle diameter of 100mm is A1 : 4 A2 : 0.25 A3 : 2500 A4 : 0.0025	1.0	0.25
Multiple Choice Question				
58	58	The standard deviation of a discrete variable following a Poisson distribution with mean as 5 is A1 5	1.0	0.25

		: A2 1/5 : A3 5^2 : A4 $5^{1/2}$:		
Multiple Choice Question				
59	59	'A' class inventory items, in comparison with 'C' class items, usually have A1 Higher service levels : A2 Lower service levels : A3 Equal service levels : A4 Service levels have nothing to do with A or C class :	1.0	0.25
Multiple Choice Question				
60	60	A surface with a large Ra value, or a positive Rsk, will usually A1 Have high friction and wear quickly : A2 Have high friction and doesn't wear quickly :	1.0	0.25

		A3 : Have low friction and wear quickly A4 : Have high friction and won't wear quickly		
Multiple Choice Question				
61	61	In a series RL ac circuit consisting of R, X and Z ohms resistance, reactance and an impedance respectively, the power factor of the circuit is A1 : X/R A2 : R/Z A3 : X/Z A4 : Z/X	1.0	0.25
Multiple Choice Question				
62	62	For a balanced three-phase load, a wattmeter is used by connecting its current coil in phase A and voltage coil across phase B and C. Its reading will give: A1 : $V_{ph} I_{ph} \cos\theta$ A2 : $V_{ph} I_{ph} \sin\theta$	1.0	0.25

		A3 $\sqrt{3}\ V_{ph}\ I_{ph}\ \cos\theta$: A4 $\sqrt{3}\ V_{ph}\ I_{ph}\ \sin\theta$:		
Multiple Choice Question				
63	63	A 3-phase synchronous motor is running at half load, unity pf, its load is increased to full load with no change in field excitation, its new power factor will be A1 : unity power factor A2 : lagging power factor A3 : leading power factor A4 : depends on motor parameters	1.0	0.25
Multiple Choice Question				
64	64	The Laplace transform of (sin3t) is A1 $S/(S^2+9)$: A2 $3/(S^2-9)$: A3 $3/(S^2+9)$:	1.0	0.25

		A4 : $S/(S^2-9)$		
Multiple Choice Question				
65	65	Lissajous patterns are used to measure A1 : voltage and frequency A2 : phase shift and frequency A3 : amplitude and frequency A4 : none of the above	1.0	0.25
Multiple Choice Question				
66	66	According to the maximum power theorem, load impedance must be A1 : resistive equal to source impedance A2 : inductive equal to source impedance A3 : complex conjugate of source impedance A4 : same as source impedance	1.0	0.25
Multiple Choice Question				

67	67	In a series RLC circuit, a dc source voltage V is suddenly applied. Assuming the initial storages in elements to be zero, the initial and final currents i_o, and i_f respectively are A1 : both zero A2 : both V/R A3 : $i_o = V/R,\ i_f = 0$ A4 : $i_o = 0$ and $i_f = V/R$	1.0	0.25
Multiple Choice Question				
68	68	In a series RLC circuit with variable frequency, the power factors of the circuit below resonance and above resonance respectively are A1 : Both lagging A2 : both leading A3 : leading and lagging A4 : lagging and leading	1.0	0.25
Multiple Choice Question				
69	69	If for a given armature current, the field current of a dc shunt motor is reduced, the changes will be	1.0	0.25

		A1 : both speed and developed torque will reduce A2 : both speed and developed torque will increase A3 : speed will reduce and developed torque will increase A4 : speed will increase and developed torque will reduce		
Multiple Choice Question				
70	70	Moving coil(MC) and moving iron(MI) meters can measure following signals A1 : MC and MI both for ac only A2 : MI for both ac and dc and MC for dc only A3 : MC for both ac and dc and MI for dc only A4 : MC and MI for both ac and dc	1.0	0.25
Multiple Choice Question				
71	71	The first short upward movement of an ECG trace is called A1 : T wave	1.0	0.25

		A2: Q wave A3: P wave A4: S wave		
Multiple Choice Question				
72	72	Erithrocyte Sedimentation Rate (ESR) measures the rate at which A1: red blood cells sediment in 1 hour A2: white blood cells sediment in 1 hour A3: white blood cells sediment in 24 hour A4: red blood cells sediment in 24 hour	1.0	0.25
Multiple Choice Question				
73	73	To convert an ammeter in to a voltmeter, we need to connect A1: high resistance in shunt to the ammeter A2: high resistance in series to the ammeter A3 low resistance in shunt to the ammeter	1.0	0.25

		: A4 : low resistance in series to the ammeter		
Multiple Choice Question				
74	74	Piezoelectric sensors are used for A1 : measurement of velocity A2 : measurement of pressure A3 : measurementof temperature A4 : measurement of volume	1.0	0.25
Multiple Choice Question				
75	75	A capacitance of 0.5F has a voltage across it changing at the rate of 5V/sec. The current through the capacitor will be A1 : 5 Amps A2 : 10 Amps A3 : 2.5 Amps A4 : 0.5Amps	1.0	0.25

Multiple Choice Question				
76	76	The fastest available A to D converters are based on A1 : Flash Converter A2 : Dual Slope Converter A3 : SAR converters A4 : Sigma Delta converter	1.0	0.25
Multiple Choice Question				
77	77	The decimal number 110 is represented in hexadecimal form as A1 : B0 A2 : 6E A3 : 1A A4 : 78	1.0	0.25
Multiple Choice Question				
78	78	The purpose of source encoding is to A1 Encrypt the data for security	1.0	0.25

		: A2 : Compress the signal for efficient bandwidth utilization A3 : Add redundancy to increase robustness to channel errors A4 : Modulate by a carrier to transmit in the required channel		
Multiple Choice Question				
79	79	MIMO communications exploits A1 : Temporal diversity A2 : Polarization diversity A3 : Frequency diversity A4 : Spatial diversity	1.0	0.25
Multiple Choice Question				
80	80	The process of transmitting two or more signals simultaneously over the same channel is called A1 : Modulation A2 : Mixing	1.0	0.25

		A3 : Multiplexing A4 : Broadcasting		
Multiple Choice Question				
81	81	Which of the following is not the component of a CPU A1 : NIC Card A2 : VSAT A3 : RAM A4 : AGP Card	1.0	0.25
Multiple Choice Question				
82	82	Magnetic tape is a...? A1 : Serial access medium A2 : Random access medium A3 : A parallel access medium A4 None of above	1.0	0.25

		:		
Multiple Choice Question				
83	83	What is the decimal value of the octal number 215? A1 : 327 A2 : 141 A3 : 97 A4 : None of the above	1.0	0.25
Multiple Choice Question				
84	84	Which protocol is used for browsing website: A1 : TCP A2 : HTTP A3 : FTP A4 : TFTP	1.0	0.25
Multiple Choice Question				
85	85	The address of the next instruction to be executed by the current process is provided by the	1.0	0.25

		A1 : CPU registers A2 : program counter A3 : process stack A4 : pipe		
Multiple Choice Question				
86	86	In priority scheduling algorithm, when a process arrives at the ready queue, its priority is compared with the priority of A1 : all process A2 : currently running process A3 : parent process A4 : init process	1.0	0.25
Multiple Choice Question				
87	87	Which of the following condition is required for deadlock to occur A1 : mutual exclusion	1.0	0.25

		A2 : a process holds allocated resources while awaiting assignment of other resources A3 : no resource can be forcibly removed from a process holding it A4 : all of the mentioned		
Multiple Choice Question				
88	88	A variable P is called pointer if A1 : P contains the address of an element in DATA field A2 : P points to the address of first element in DATA field A3 : P can store only memory addresses A4 : P contain the DATA and the address of DATA field	1.0	0.25
Multiple Choice Question				
89	89	The complexity of binary search algorithm is A1 : n A2 : nlogn A3 logn	1.0	0.25

		: A4 n^2 :		
Multiple Choice Question				
90	90	A sparse matrix has A1 many zero entries : A2 many non-zero entries : A3 higher dimension : A4 none of above :	1.0	0.25
Multiple Choice Question				
91	91	The process of building new classes from existing one is called _____. A1 Polymorphism : A2 Structure : A3 Inheritance : A4 Cascading :	1.0	0.25

Multiple Choice Question				
92	92	On which principle does stack work A1 : FILO A2 : FIFO A3 : LILO A4 : LIFO	1.0	0.25
Multiple Choice Question				
93	93	How long is an IPv6 address? A1 : 32 bits A2 : 128 bytes A3 : 64 bits A4 : 128 bits	1.0	0.25
Multiple Choice Question				
94	94	Which one of the following is not a secondary storage? A1 magnetic disks	1.0	0.25

		: A2 : magnetic tapes A3 : RAM A4 : none of the mentioned		
Multiple Choice Question				
95	95	The time for the disk arm to move the heads to the cylinder containing the desired sector is called A1 : disk time A2 : seek time A3 : arm time A4 : sector time	1.0	0.25
Multiple Choice Question				
96	96	What is Unicode? A1 : Standard Font A2 : Software	1.0	0.25

		A3 : Character Encoding System A4 : Keyboard layout		
Multiple Choice Question				
97	97	Given a binary search tree, which traversal type would print the values in the nodes insorted order? A1 : Preorder A2 : Postorder A3 : Inorder A4 : None of the above	1.0	0.25
Multiple Choice Question				
98	98	What is a compiler? A1 : A compiler does a conversion line by line as the program is run. A2 : A compiler converts the whole of a higher level program code into machine code in one step A3 : A compiler is a general purpose language providing very efficient execution.	1.0	0.25

		A4 : None of the above		
Multiple Choice Question				
99	99	Which among the following interacts directly with system hardware? A1 : Shell A2 : Commands A3 : Kernel A4 : Applications	1.0	0.25
Multiple Choice Question				
100	100	Which of the following can be Software: A1 : Routers A2 : Firewalls A3 : Gateway A4 : Modems	1.0	0.25

TIFAC

KIRAN-IPR Examination

PREVIEW QUESTION BANK

Module Name : WOSC08-E
Exam Date : 31-Oct-2015 Batch : 11:00-13:00

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
Multiple Choice Question				
101	101	'XEROX COPY OF BILL WAS SENT' is coded as 'ZGTQZ EQRA QH DKNN YCU UGPV'. Based on this coding scheme, tick the code from the answer choices for the word **WATER**: A1 : GVCTT A2 : YCVGT A3 : EQARR	1.0	0.25

		A4 : EAVER		
Multiple Choice Question				
102	102	If 'HBPQMNOT' stand for 'SUNDAY TO', how will you write 'YOU DO SO' using the coding scheme used for SUNDAY TO? A1 : N T B Q T HT A2 : N T B Q T H B A3 : N T Q B T H B A4 : N T Q B T H T	1.0	0.25
Multiple Choice Question				
103	103	If 12345671586 stands for 'TERMINATION', What number does 371586 stands for? A1 : MOTION A2 : NATION A3 : RATION A4 : NOTION	1.0	0.25

Multiple Choice Question				
104	104	If III stands for 2, IIII for 3 and II for 1, how will you solve : IIII – II + III + IIIII = ? A1 : IIIIIII A2 : IIIIIIII A3 : IIIII A4 : VII	1.0	0.25
Multiple Choice Question				
105	105	A is richer than B, C is richer than A, D is richer than C, and E is the richest of all. If they are made to sit in the above degree of richness who will have the medial position (central position): A1 : A A2 : B A3 : C A4 : E	1.0	0.25
Multiple Choice Question				
106	106	In a jungle, there are a total of 38 animals. Out of these, 7 are herbivores, 10 are carnivores and rest are omnivores. The	1.0	0.25

		remaining animals are equally divided into carnivores and omnivores. Now, how many animals do not eat plants? A1 : 18 A2 : 31 A3 : 23 A4 : 13		
Multiple Choice Question				
107	107	In a sample, there are 60 men and 70 women. Out of men, 35 own mobiles and rest own computers. Among women, 20 own mobiles and rest own computers. In the overall sample, what is the percentage of women owning mobile phones? A1 : 15% A2 : 28% A3 : 38% A4 : 36%	1.0	0.25
Multiple Choice Question				
108	108		1.0	0.25

		Please read the following quote by Jerome K. Jerome. Which correctly reflects the quote? It is a most extraordinary thing, but I never read a patent advertisement without being impelled to the conclusion t suffering from the particular disease therein dealt with ir virulent form. A1: Jerome is suffering from a deadly disease A2: Jerome is forced to believe that he is having a deadly disease A3: Jerome thinks that advertised medicine is extra ordinary A4: Jerome never reads a patent medicine advertisement		
Multiple Choice Question				
109	109	In the light of arguments below, which one of the following c is logical? All women are biologists Some patent agents are women A1: All patent agents are biologists A2: All women are patent agents A3: Some biologists are patent agents	1.0	0.25

		A4 : No logical conclusion		
Multiple Choice Question				
110	110	1. Poles:Magnet = _____: Battery A1 : energy A2 : power A3 : terminals A4 : Water	1.0	0.25
Multiple Choice Question				
111	111	What is 67 x 92 A1 : 7125 A2 : 6164 A3 : 7200 A4 : 8000	1.0	0.25
Multiple Choice Question				

112	112	What is the cube root of 50653 A1 : 37 A2 : 35 A3 : 57 A4 : 63	1.0	0.25
Multiple Choice Question				
113	113	What will be the compound interest on INR 5000/- for 2 years a of 12 % p.a A1 : 1272 A2 : 1560 A3 : 1000 A4 : 4000	1.0	0.25
Multiple Choice Question				
114	114	A shopkeeper bought 2 fans for INR 800 each. He sold one for of 12% and the other at a loss of 12 %. What would be his ov or loss in the transaction?	1.0	0.25

		A1 : No profit or loss A2 : 10%profit A3 : 10%loss A4 : 11%profit		
Multiple Choice Question				
115	115	What is the answer for 87 x 96 x 100 x 0 x 75 x 1 A1 : 1015677810 A2 : 0 A3 : 756271179 A4 : 656354219	1.0	0.25
Multiple Choice Question				
116	116	A:B =7:4, After 5 years, A: B =11:7, What is A? A1 : 12 years A2 : 14 years	1.0	0.25

		A3 : 15 years A4 : 28 years		
Multiple Choice Question				
117	117	$? + 79^2 = 172^2 - 88^2 - 8203$ A1 : 86 A2 : 89 A3 : 83 A4 : 93	1.0	0.25
Multiple Choice Question				
118	118	What would be the average of 61,63,65,67,69 A1 : 62.5 A2 : 62 A3 : 65	1.0	0.25

		A4 : 66		
Multiple Choice Question				
119	119	A thief spots a policeman 100m away and takes to his heels. If the policeman gives a chase immediately, then how far would the thief have run before getting caught? The speeds of the policeman and the thief are 10kmph and 8kmph respectively A1 : 400m A2 : 500m A3 : 600m A4 : 700m	1.0	0.25
Multiple Choice Question				
120	120	What would be the average of : 9, 10, 11,12 ? A1 : 10 A2 : 11 A3 : 10.5 A4 : 12	1.0	0.25

Multiple Choice Question				
121	121	Which of the following does not support the wave nature of Light? A1 : Interference A2 : Polarisation A3 : Compton effect A4 : Diffraction	1.0	0.25

Multiple Choice Question				
122	122	At what velocity the kinetic energy of a body is equal to its rest mass energy? A1 : $\sqrt{3}c/2$ A2 : $c/2$ A3 : $c/3$ A4 : $0.25c$	1.0	0.25

Multiple Choice Question				
123	123	Which one is the correct volume element in spherical polar coordinate system?	1.0	0.25

		A1 $dV = r\sin\theta dr d\theta d\phi$: A2 $dV = \sin\theta dr d\theta d\phi$: A3 $dV = r^2\sin\theta dr d\theta d\phi$: A4 $dr d\theta d\phi$:		
Multiple Choice Question				
124	124	The energy of a particle in an infinite potential well is A1 : proportional to n^2 A2 : inversely proportional to n^2 A3 : proportional to n A4 : inversely proportional to n	1.0	0.25
Multiple Choice Question				
125	125	Group velocity of an electron in 1-D lattice is defined as A1 $V_g = dk/d\omega$: A2 $V_g = d\omega/dk$:	1.0	0.25

		A3 $V_g = \omega k$: A4 $V_g = \omega / k$:		
Multiple Choice Question				
126	126	The energy gap between the valence and conduction bands in a semiconductor is of the order of A1 26eV : A2 1.0 eV : A3 7eV : A4 0.001eV :	1.0	0.25
Multiple Choice Question				
127	127	Brewster's law in term of refractive index can be expressed as A1 $\mu = \tan i_p$: A2 $\mu = \cos i_p$: A3 $\mu = \sin i_p$:	1.0	0.25

		A4 $\mu = \omega t i_p$: 		
Multiple Choice Question				
128	128	Which of the following phenomena tells about the transverse nature of the light? A1 : Interference A2 : Diffraction A3 : Polarization A4 : Photoelectric effect	1.0	0.25
Multiple Choice Question				
129	129	The unit of spring constant in S.I. systems of units is A1 Nm^{-2} : A2 Nm^{-1} : A3 Nm^{2} : A4 Nm :	1.0	0.25
Multiple Choice Question				

130	130	Which one of the following relation is valid for group velocity V_g velocity V_p? A1 : $V_g = V_p - \lambda dV_p / d\lambda$ A2 : $V_g = V_p + \lambda dV_p / d\lambda$ A3 : $V_g = V_p / \lambda$ A4 : none of these	1.0	0.25
Multiple Choice Question				
131	131	Which one of the following operator is associated with momentum? A1 : $\frac{\hbar}{i}\bar{\nabla}$ A2 : $-\frac{\hbar^2}{i}\nabla^2$ A3 : $\frac{\hbar^2}{i}\nabla^2$ A4 : $\frac{\hbar^2}{2m}\nabla^2$	1.0	0.25
Multiple Choice Question				
132	132	Ratio between energy levels of ground state and the first	1.0	0.25

		excited state of one dimensional square well potential is A1 : 1:2 A2 : 2:1 A3 : 1:4 A4 : 1:8		
Multiple Choice Question				
133	133	Which one of the following is the radius of first Bohr's orbit? A1 : $\varepsilon_0 h^2 / \pi m Z e^2$ A2 : $\varepsilon_0 \hbar^2 / \pi m Z e^2$ A3 : $\varepsilon_0 \hbar^2 / \pi m Z^2 e^2$ A4 : $\varepsilon_0 h^2 / \pi m Z^2 e^2$	1.0	0.25
Multiple Choice Question				
134	134	Which one of the following has the lowest wavelength? A1 : Visible light	1.0	0.25

		A2 : X-rays A3 : Infra-red rays A4 : Ultraviolet rays		
Multiple Choice Question				
135	135	The process by which a beam of white light splits into its constituent colors is known as A1 : Reflection A2 : Dispersion A3 : Divergence A4 : Convergence	1.0	0.25
Multiple Choice Question				
136	136	An example of mechanical wave is A1 : Radio wave A2 : Light wave A3 Infrared radiation	1.0	0.25

		: A4 Sound wave :		
Multiple Choice Question				
137	137	If the speed of the object is doubled then its kinetic energy is A1 Doubled : A2 Halved : A3 Tripled : A4 Quadrupled :	1.0	0.25
Multiple Choice Question				
138	138	For a conservative field A1 $\oint \vec{E} \cdot \overrightarrow{dl} = 0$: A2 $\oint \vec{E} \cdot \overrightarrow{dl} = El$: A3 $\oint \vec{E} \cdot \overrightarrow{dl} = 1$: A4 None of above :	1.0	0.25

Multiple Choice Question				
139	139	The relation between electric field and potential is A1 : $\vec{E} = \vec{\nabla}V$ A2 : $\vec{E} = -\vec{\nabla}V$ A3 : $\vec{E} = \overrightarrow{\nabla^2}V$ A4 : $\vec{E} = \overrightarrow{-\nabla^2}V$	1.0	0.25

Multiple Choice Question				
140	140	Which of the following wave functions represents a free partic along +ve X-axis A1 : $Ae^{i(kx-\omega t)}$ A2 : $Ae^{-i(kx-\omega t)}$ A3 : Asin(kx-ωt) A4 : Acos(kx-ωt)	1.0	0.25

Multiple Choice Question				
141	141	WTO stands for A1 World Trade Organisation	1.0	0.25

		: A2 : World Trademark Organisation A3 : World Tariff Organisation A4 : World Transport Organisation		
Multiple Choice Question				
142	142	A doctor invents a machine which can diagnose 'painlessly'. Such machine is A1 : Patentable A2 : Non patentable A3 : Trade mark related A4 : None of the above	1.0	0.25
Multiple Choice Question				
143	143	Term of patent in India is A1 : 10 years A2 : 15 years	1.0	0.25

		A3 : 20 years A4 : 25 years		
Multiple Choice Question				
144	144	Match Column A and Column B and tick the right answer SNo Column A SNo Column B 1 Trade Dress p Process for purification of dye 2 Patent q Unique get up of a restaurant 3 Trademark r Name of a product 4 Design s Snail shape of the perfume bottle A1 : 1q-2p-3r-4s A2 : 1s-2r-3p-4q A3 : 1p-2s-3q-4r A4 : 1r-2q-3s-4p	1.0	0.25
Multiple Choice Question				
145	145	Tick one of the following that is incorrect A1 : New form of a known substance can be patented in India if it has enhanced efficacy	1.0	0.25

		A2 : Design registration can be obtained in India on functional aspects of the article A3 : The Patents Act 1970 in India allows for protection of processes related to preparation of semiconductor chips A4 : Products derived out of traditional knowledge may be patentable in India		
Multiple Choice Question				
146	146	One of the following is not under the scope of protection offered under the Paris Convention A1 : Copyrights A2 : Utility models A3 : Designs A4 : Trade marks	1.0	0.25
Multiple Choice Question				
147	147	Disclosure of source and geographical origin is_____ requirement for examination of a patent in case of biotechnology applications in India A1 : Mandatory A2 : Optional	1.0	0.25

		A3 : Voluntary A4 : Essential		
Multiple Choice Question				
148	148	Which of the following statements is incorrect A1 : These is a link between product place link in general in case of GIs A2 : All GIs and appellations of origin are indications of source but not vice versa A3 : All appellations of origin are geographical indications and vice versa A4 : Appellations of origin necessarily need a product place link	1.0	0.25
Multiple Choice Question				
149	149	One of the following cases led to the patenting of modified microorganisms in India A1 : Diamond v Chakrabarty A2 : Diamond v Diehr A3 : Dimminaco AG v Controller of Patents	1.0	0.25

		A4 : Novartis v Controller of Patents		
Multiple Choice Question				
150	150	'Work of Architecture' can be protected under A1 : Design A2 : Patent A3 : Trade Dress A4 : Copyright	1.0	0.25
Multiple Choice Question				
151	151	The determinant of the matrix $2\begin{pmatrix} 1 & 2 & 3 \\ 0 & 1 & 4 \\ 0 & 0 & 1 \end{pmatrix}^{10}$. is A1 : 2 A2 : 2^3 A3 : 2^4	1.0	0.25

		A4 : 2^{10}		
Multiple Choice Question				
152	152	The integral $\int_{-1}^{1} \frac{dx}{x^2}$ A1 : Converges to -2 A2 : Converges to 0 A3 : Converges to 2 A4 : Does not converge	1.0	0.25
Multiple Choice Question				
153	153	Total number of linearly independent vectors in {(1,0,0,0),(1,1,0,0),(2,1,0,0),(2,2,2,2)} is A1 : 1 A2 : 2 A3 : 3 A4 4	1.0	0.25

		:		
Multiple Choice Question				
154	154	Number of real zeros of the polynomial $5x^3 - 2x^2 + 3x - 5$ is A1 : 0 A2 : 1 A3 : 2 A4 : 3	1.0	0.25
Multiple Choice Question				
155	155	The number of points at which the tangent to the curve $y = 3x^4+2x^3+10x+9$ is parallel to the line $y=4x-1$ A1 : 1 A2 : 2 A3 : 3 A4 4	1.0	0.25

		:		
Multiple Choice Question				
156	156	The number of solutions of the system of equations $x + y + 2z = 4,\ x + z = 5,\ 2x + y + 3z = 6$ A1 : 0 A2 : Exactly one A3 : Exactly two A4 : Infinitely many	1.0	0.25
Multiple Choice Question				
157	157	The rank of the matrix $\begin{pmatrix} 1 & 2 & -1 \\ 6 & 4 & 2 \\ 4 & -1 & 5 \end{pmatrix}$ is A1 : 0 A2 : 1 A3 : 2 A4 : 3	1.0	0.25

Multiple Choice Question				
158	158	If the area of the triangle in the complex plane with the vertic and iz is 8, then z lies on a circle with radius A1 : 1 A2 : 2 A3 : 3 A4 : 4	1.0	0.25
Multiple Choice Question				
159	159	In a class 60% of the students want to dance, and 70% want cricket. What percentage of students want to dance watching cri A1 : 30% A2 : 20% A3 : 10% A4 : 0%	1.0	0.25
Multiple Choice Question				

160	160	The probability of throwing 9 at least in a single throw with two dice is A1: 2/9 A2: 4/9 A3: 5/9 A4: 5/18	1.0	0.25
Multiple Choice Question				
161	161	_____ his friends speaks any English A1: Both of A2: Some of A3: None of A4: All of	1.0	0.25
Multiple Choice Question				
162	162	Sapna went to buy ____ engagement ring for Satish yesterday A1: a	1.0	0.25

		A2: an A3: that A4: those		
Multiple Choice Question				
163	163	She took _____ books with her while going on holiday but she read only a few of them during her stay A1: much A2: none A3: plenty A4: a lot of	1.0	0.25
Multiple Choice Question				
164	164	A young boy who is away from his mother and father for the first time often _____ A1: miss him A2: misses them	1.0	0.25

		A3: misses him A4: miss them		
Multiple Choice Question				
165	165	Babies ____ when they are hungry A1: cry A2: cries A3: cried A4: are crying	1.0	0.25
Multiple Choice Question				
166	166	Which one of the following sentences is correct? A1: I don't know how many brothers and sisters do you have? A2: I don't know how many brothers and sisters you have. A3: I don't know how many brothers and sisters have you. A4 I don't know how much brothers and sisters does you have?	1.0	0.25

		:		
Multiple Choice Question				
167	167	The film was more enjoyable _____ we had expected A1 : than A2 : then A3 : since A4 : as	1.0	0.25
Multiple Choice Question				
168	168	The new teacher spoke so softly ____ we had to ask her to be louder A1 : that A2 : then A3 : so A4 : who	1.0	0.25
Multiple Choice Question				
16	169	I will not sing that song ____ you sing with me	1.0	0.2

9		A1: because A2: lest A3: for A4: unless		5
Multiple Choice Question				
170	170	Which of the following choices would make the sentence meaningfully complete:"Rousseau was the most_____speaker I had ever heard until I came to know Martin Luther." A1: vain A2: arrogant A3: articulate A4: accoutred	1.0	0.25
Multiple Choice Question				
171	171	Which of the following choices would make the sentence meaningfully complete:"Most of the stories regarding the miracles performed by various religious prophets are_____, there is no historical evidence to support them."	1.0	0.25

		A1 : illogical A2 : genuine A3 : fictitious A4 : interesting		
Multiple Choice Question				
172	172	In the sentence below one word has been printed in bold. Find the appropriate word from the words suggested below which can replace the word printed in bold, without changing the meaning of the sentence. She came in utter disrepute due to her **vindictive** act. A1 : Eventful A2 : Derogatory A3 : ungrateful A4 : revengeful	1.0	0.25
Multiple Choice Question				
173	173	Synonym of **Yardstick** is A1 crime	1.0	0.25

		: A2 : possession A3 : standard A4 : ethics		
Multiple Choice Question				
174	174	Synonym of **Sporadic** is A1 : Intermittent A2 : continuous A3 : weekly A4 : contumacious	1.0	0.25
Multiple Choice Question				
175	175	**In the following sentence, a part of sentence is given Below are given alternatives to the bold part as (a), (b), may improve the sentence. Choose the correct alternative no improvement is needed, the answer is (d)** To get into the building I'll **disguise as** a reporter A1 : Disguise to be	1.0	0.25

		A2 : Disguise as one A3 : Disguise myself A4 : No improvement		
Multiple Choice Question				
176	176	**In the following sentence, a part of sentence is given Below are given alternatives to the bold part as (a), (b), may improve the sentence. Choose the correct alternative no improvement is needed, the answer is (d)** He denied that he had **not forged** my signature A1 : would not forge A2 : had forged A3 : did not forge A4 : No improvement	1.0	0.25
Multiple Choice Question				
177	177	Spot the error in the sentence: "It was him / who came running/ into the classroom." A1 : It was him	1.0	0.25

		A2 : who came running A3 : into the classroom A4 : It was he		
Multiple Choice Question				
178	178	Spot the error in the sentence: “None of two girls/ who were present/ were inclined to listen / to sane advice”. A1 : None of two girls A2 : who were present A3 : were inclined to listen A4 : to sane advice	1.0	0.25
Multiple Choice Question				
179	179	Choose the correct option so as to make the sentence grammatically correct: “Rahul Gandhi had a _____with Akhilesh Yadav.” A1 : face of A2 : face-off	1.0	0.25

		A3 : face angle A4 : face fly		
Multiple Choice Question				
180	180	Choose the correct option so as to make the sentence grammatically correct: “Please consult the _____ and tell me on which day the Christmas will fall in this year.” A1 : calendar A2 : celandar A3 : calander A4 : calender	1.0	0.25